

APPENDIX D

FREEWAY RAMP ILV ANALYSIS SHEETS

Existing - AM

INTERSECTION

Signalized Intersection CAPACITY ANALYSIS

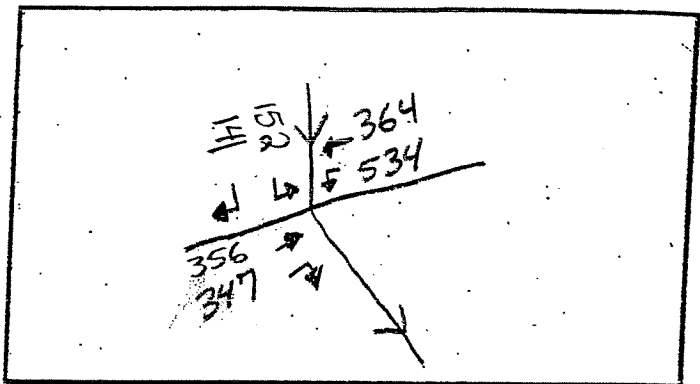
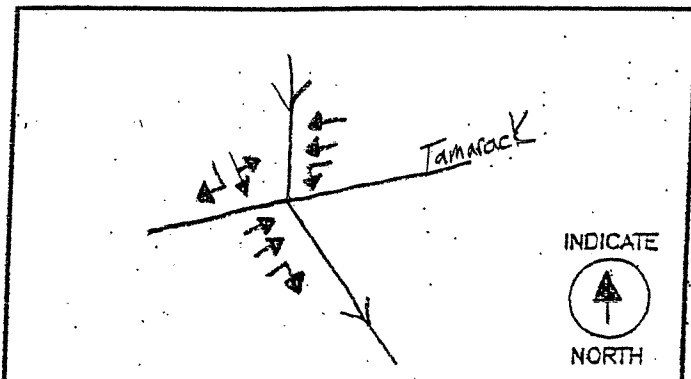
INTERSECTION Tamarack/I-5 SB Ramps

DIST. CO. RTE. P.M. Carlsbad

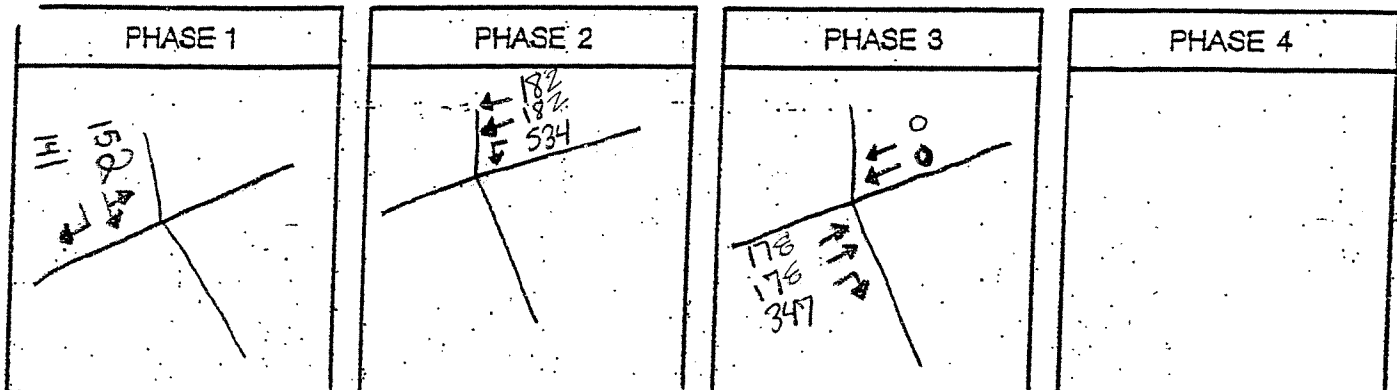
BY JN DATE 9-26

TIME AM PM

DIAGRAM AND TRAFFIC FLOWS:



LANE VOLUMES (ILV/HR)



CRITICAL LANE VOLUMES (ILV/HR)

| PHASE 1 | PHASE 2 | PHASE 3 | PHASE 4 |
|---------|---------|---------|---------|
| 152 | 534 | 347 | |

TOTAL OPERATING LEVEL (ILV/HR)

| |
|----------|
| Σ |
| 1033 |

IS . . . ☒ < 1200 ILV/HR.

☐ > 1200 BUT < 1500 ILV/HR.

☐ > 1500 ILV/HR (CAPACITY)

REMARKS:

Under Capacity

Existing + Construction Traffic - AM

INTERSECTION

Signalized Intersection CAPACITY ANALYSIS

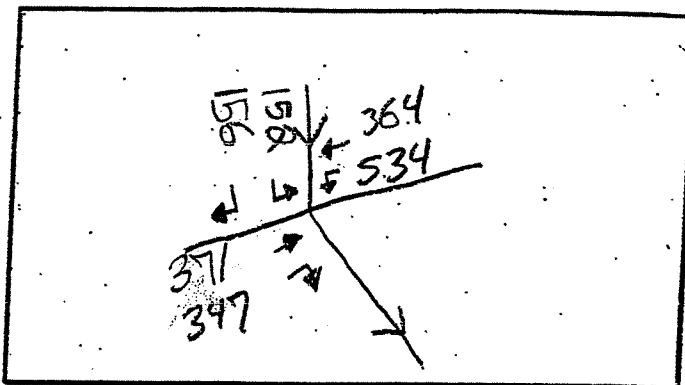
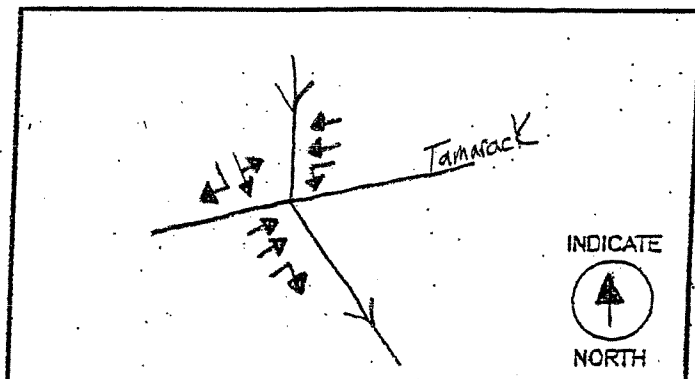
INTERSECTION Tamarack/I-5 SB Ramps

DIST. CO. RTE. P.M. Carlsbad

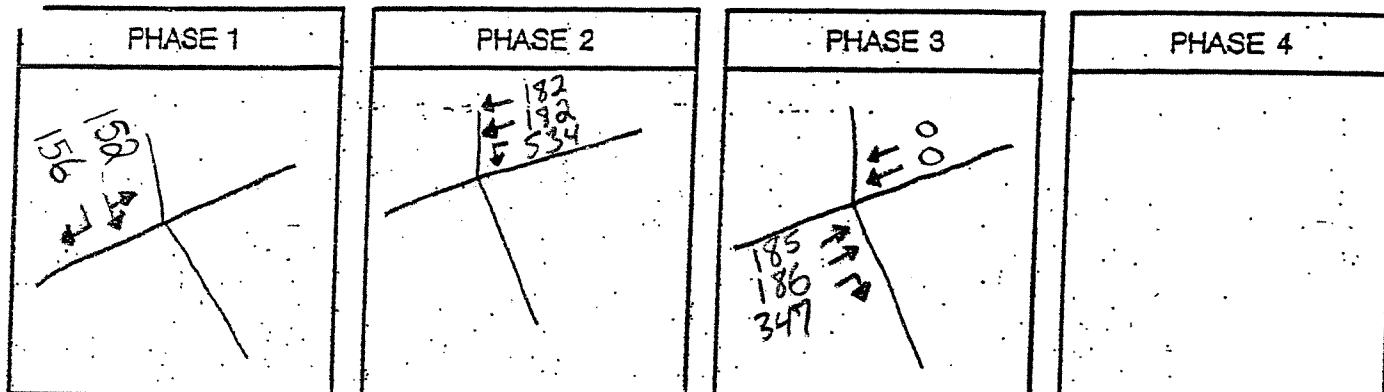
BY JN DATE 9-26

TIME _____ AM PM

DIAGRAM AND TRAFFIC FLOWS:



LANE VOLUMES (ILV/HR)



CRITICAL LANE VOLUMES (ILV/HR)

| PHASE 1 | PHASE 2 | PHASE 3 | PHASE 4 |
|---------|---------|---------|---------|
| 156 | 534 | 347 | |

TOTAL OPERATING LEVEL (ILV/HR)

| |
|----------|
| Σ |
| 1037 |

IS . . . ☒ < 1200 ILV/HR.

☐ > 1200 BUT < 1500 ILV/HR.

☐ > 1500 ILV/HR (CAPACITY)

REMARKS:

Under Capacity

Existing - PM

INTERSECTION

Signalized Intersection CAPACITY ANALYSIS

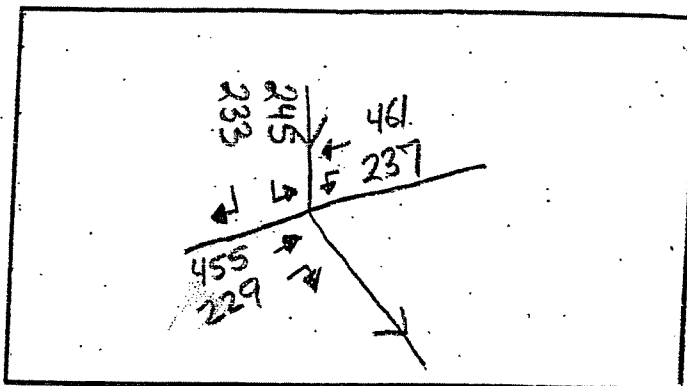
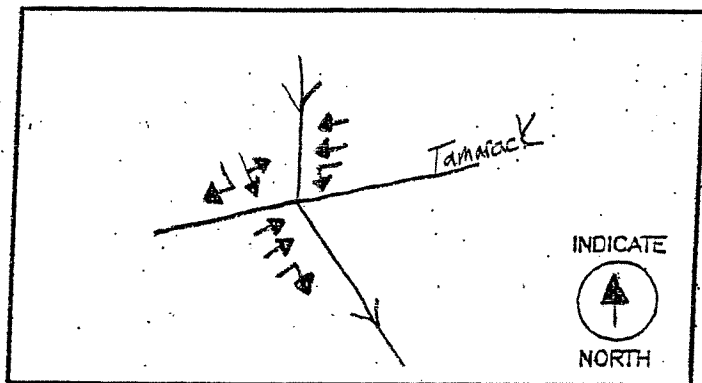
INTERSECTION Tamarack/I-5 SB Ramps

DIST. CO. RTE. P.M. Carlsbad

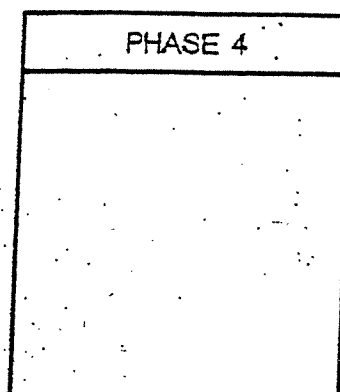
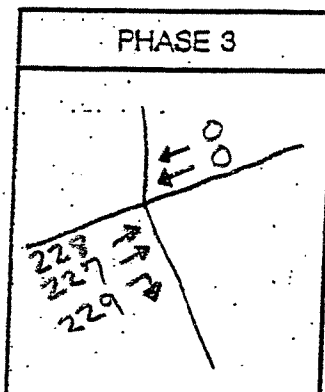
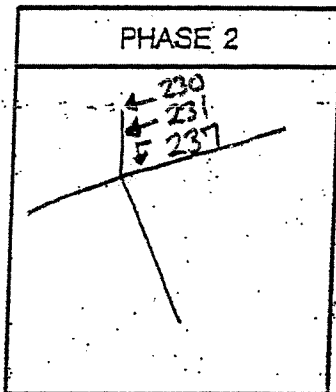
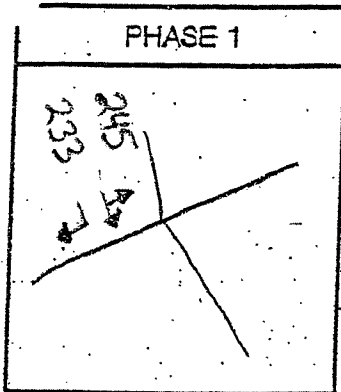
BY JN DATE 9-26

TIME _____ AM PM

DIAGRAM AND TRAFFIC FLOWS:



LANE VOLUMES (ILV/HR)



CRITICAL LANE VOLUMES (ILV/HR)

| PHASE 1 |
|---------|
| 245 |

| PHASE 2 |
|---------|
| 237 |

| PHASE 3 |
|---------|
| 228 |

| PHASE 4 |
|---------|
| |

TOTAL OPERATING LEVEL (ILV/HR)

| |
|----------|
| Σ |
| 710 |

IS ... ☒ < 1200 ILV/HR.

☐ > 1200 BUT < 1500 ILV/HR.

☐ > 1500 ILV/HR (CAPACITY)

REMARKS:

Under Capacity

Existing+Construction Traffic - PM

INTERSECTION

Signalized Intersection CAPACITY ANALYSIS

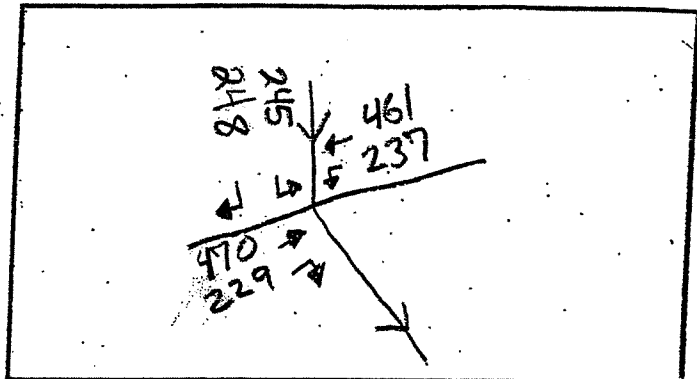
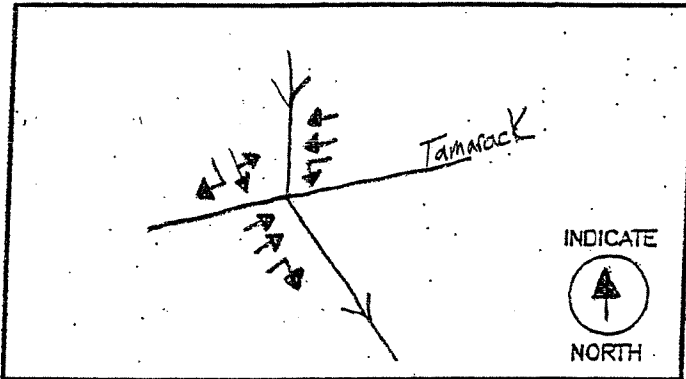
INTERSECTION Tamarack/I-5 SB Ramps

DIST. CO. RTE. P.M. Carlsbad

BY JN DATE 9-26

TIME _____ AM (PM)

DIAGRAM AND TRAFFIC FLOWS:



LANE VOLUMES (ILV/HR)

| PHASE 1 | PHASE 2 | PHASE 3 | PHASE 4 |
|------------|------------|-------------------|---------|
| | | | |
| 248 245 | 239 237 | 235 235 229 | |

CRITICAL LANE VOLUMES (ILV/HR)

| PHASE 1 | PHASE 2 | PHASE 3 | PHASE 4 |
|---------|---------|---------|---------|
| 248 | 237 | 235 | |

TOTAL OPERATING LEVEL (ILV/HR)

IS . . .

☒ < 1200 ILV/HR.

☐ > 1200 BUT < 1500 ILV/HR.

☐ > 1500 ILV/HR (CAPACITY)

| |
|----------|
| Σ |
| 720 |

REMARKS:

Under Capacity

Existing - AM

INTERSECTION

Signalized Intersection CAPACITY ANALYSIS

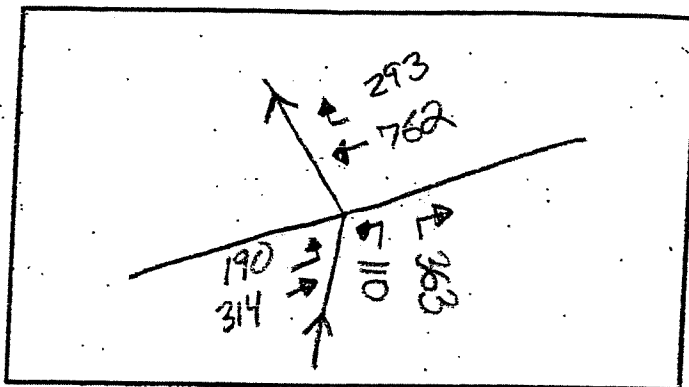
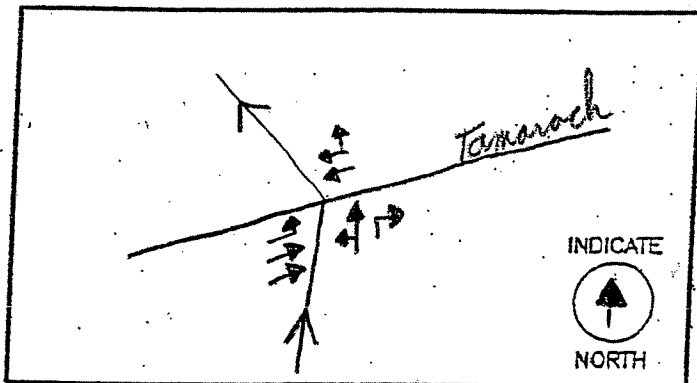
INTERSECTION Tamarack/I-5 NB Ramps

DIST. CO. RTE. P.M. Carlsbad

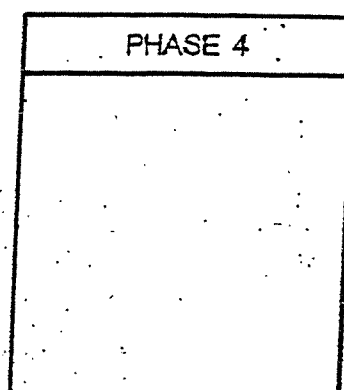
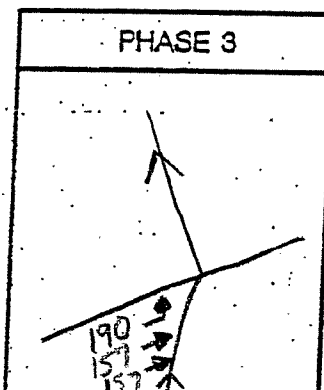
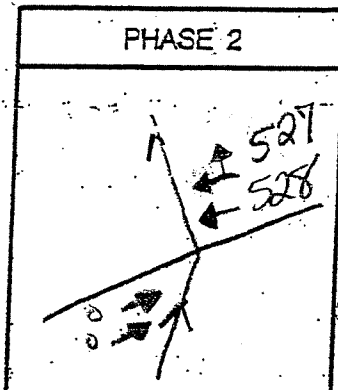
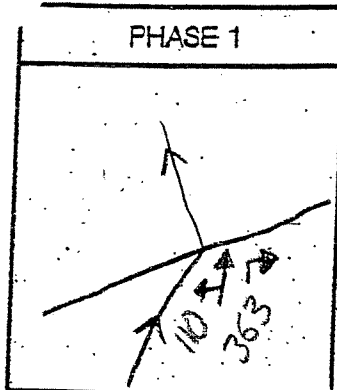
BY JN DATE 9-26

TIME AM PM

DIAGRAM AND TRAFFIC FLOWS:



CRITICAL LANE VOLUMES (ILV/HR)



CRITICAL LANE VOLUMES (ILV/HR)

| PHASE 1 |
|---------|
| 363 |

| PHASE 2 |
|---------|
| 528 |

| PHASE 3 |
|---------|
| 190 |

| PHASE 4 |
|---------|
| |

TOTAL OPERATING LEVEL (ILV/HR)

| Σ |
|----------|
| 1018 |

IS . . .

☒ < 1200 ILV/HR.

☐ > 1200 BUT < 1500 ILV/HR.

☐ > 1500 ILV/HR (CAPACITY)

REMARKS:

under Capacity

Existing + Construction Traffic - AM

INTERSECTION

Signalized Intersection CAPACITY ANALYSIS

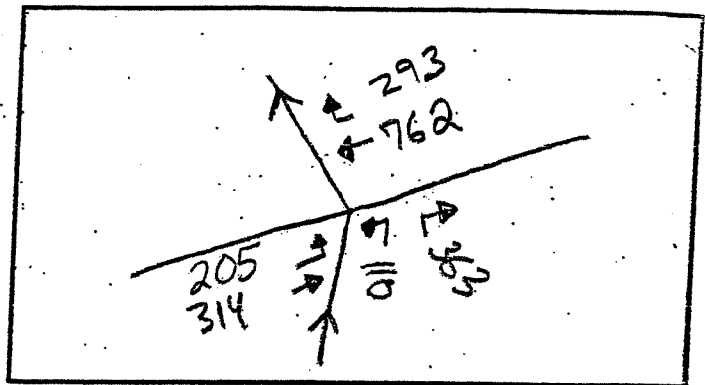
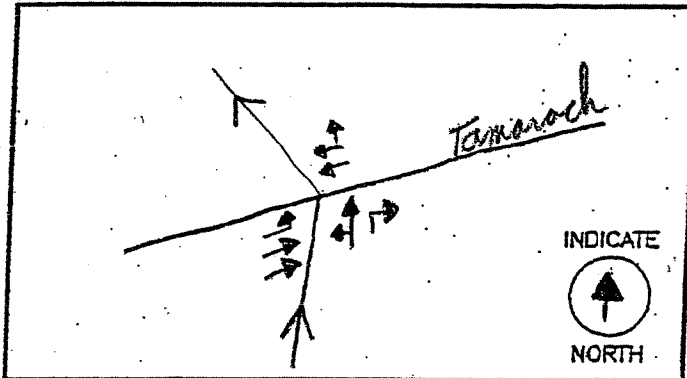
INTERSECTION Tamarack/I-5 NB Ramps

DIST. CO. RTE. P.M. Carlsbad

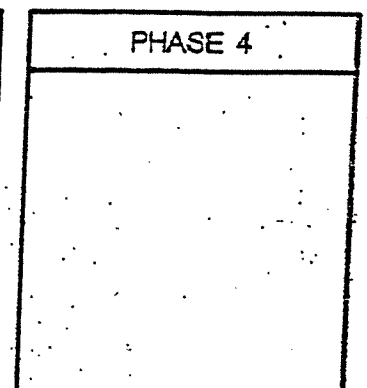
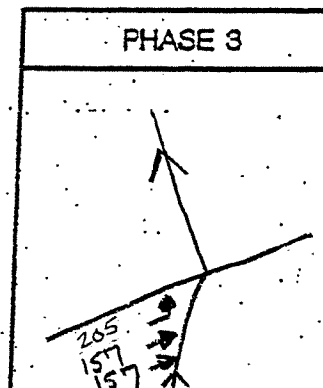
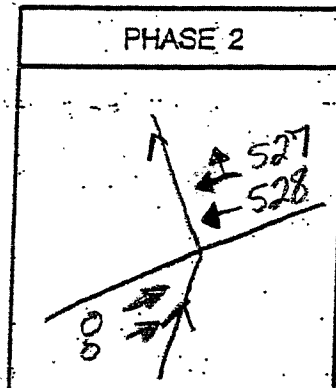
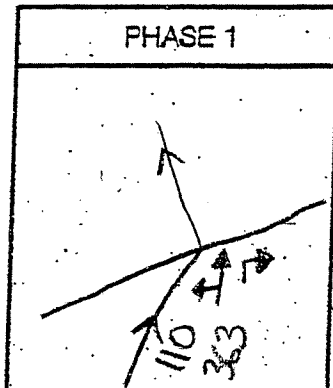
BY JN DATE 9-26

TIME AM PM

DIAGRAM AND TRAFFIC FLOWS:



LANE VOLUMES (ILV/HR)



CRITICAL LANE VOLUMES (ILV/HR)

| PHASE 1 |
|---------|
| 363 |

| PHASE 2 |
|---------|
| 528 |

| PHASE 3 |
|---------|
| 205 |

| PHASE 4 |
|---------|
| |

TOTAL OPERATING LEVEL (ILV/HR)

| Σ |
|----------|
| 1096 |

IS ... ☒ < 1200 ILV/HR.

☐ > 1200 BUT < 1500 ILV/HR.

☐ > 1500 ILV/HR (CAPACITY)

REMARKS:

Under Capacity

Existing - PM

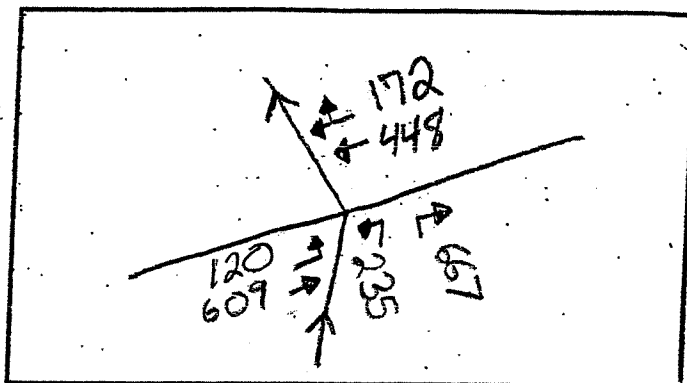
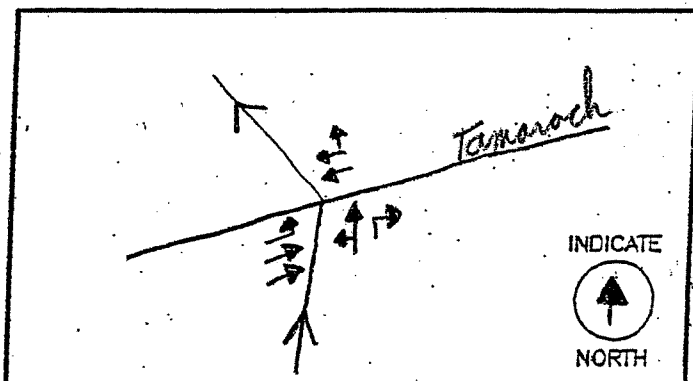
INTERSECTION

Signalized Intersection CAPACITY ANALYSIS

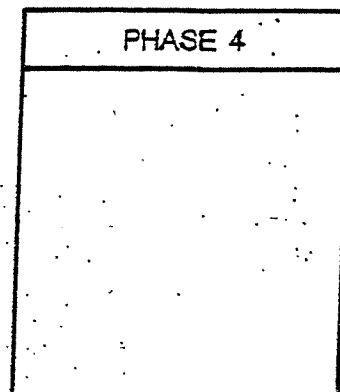
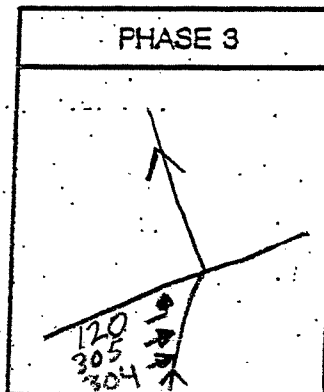
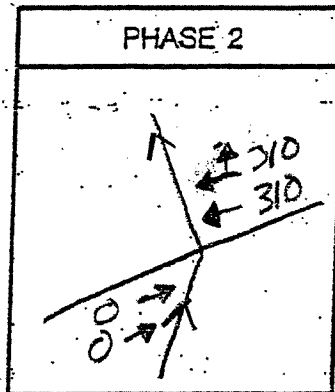
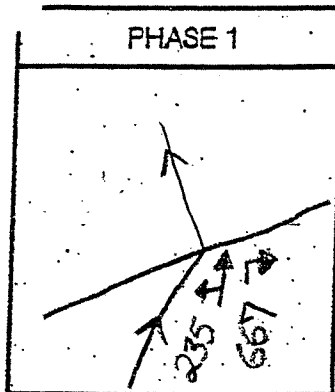
INTERSECTION Emerald/I-5 NB Ramps

DIST. CO. RTE. P.M. Carlsbad
BY JN DATE 9-26
TIME _____ AM PM

DIAGRAM AND TRAFFIC FLOWS:



LANE VOLUMES (ILV/HR)



CRITICAL LANE VOLUMES (ILV/HR)

| PHASE 1 |
|---------|
| 667 |

| PHASE 2 |
|---------|
| 310 |

| PHASE 3 |
|---------|
| 305 |

| PHASE 4 |
|---------|
| |

TOTAL OPERATING LEVEL (ILV/HR)

IS . . .

☒ < 1200 ILV/HR.

☒ > 1200 BUT < 1500 ILV/HR.

☐ > 1500 ILV/HR (CAPACITY)

Σ

1282

REMARKS:

Near Capacity

Existing + Construction Traffic - PM

INTERSECTION

Signalized Intersection CAPACITY ANALYSIS

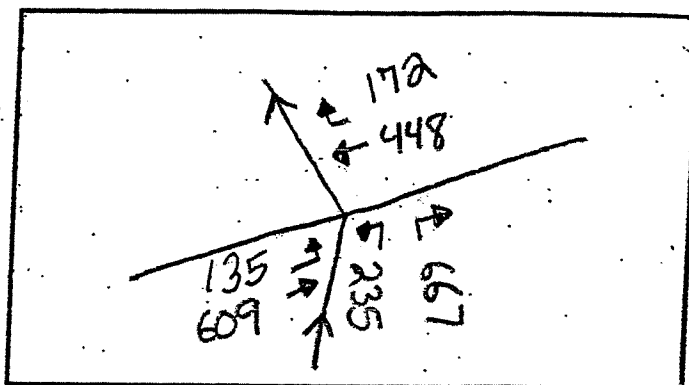
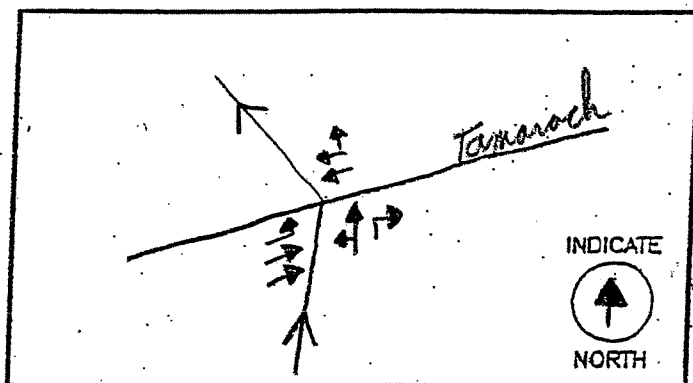
INTERSECTION Tamarack/I-5 NB Ramps

DIST. CO. RTE. P.M. Carlsbad

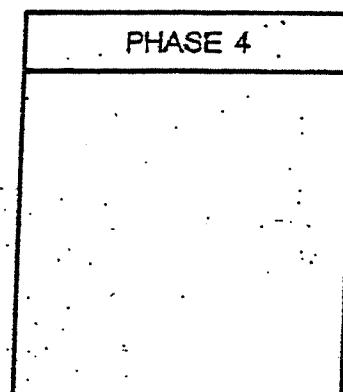
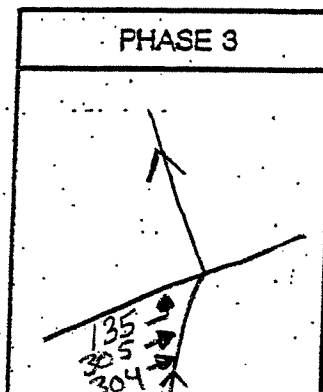
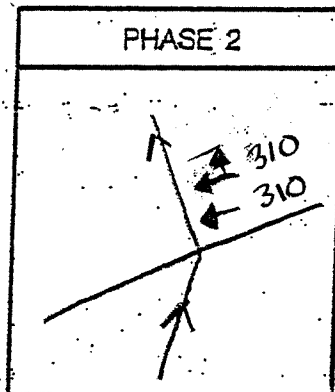
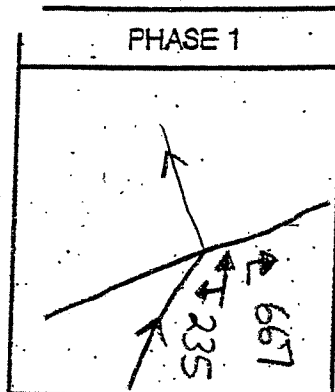
BY _____ DATE 9-26

TIME _____ AM PM

DIAGRAM AND TRAFFIC FLOWS:



CRITICAL LANE VOLUMES (ILV/HR)



CRITICAL LANE VOLUMES (ILV/HR)

| PHASE 1 |
|---------|
| 667 |

| PHASE 2 |
|---------|
| 310 |

| PHASE 3 |
|---------|
| 305 |

| PHASE 4 |
|---------|
| |

TOTAL OPERATING LEVEL (ILV/HR)

IS . . .

☒ < 1200 ILV/HR.

☒ > 1200 BUT < 1500 ILV/HR.

☐ > 1500 ILV/HR (CAPACITY)

| Σ |
|----------|
| 1282 |

REMARKS:

Near Capacity

2.8 NOISE

2.8.1 The Noise Environment

The Local Physical Environment. The features of greatest importance to the noise environment are the ocean, Carlsbad Boulevard trending north-south, parallel to the coast, a residential area that is immediately east of the boulevard and northeast of the jetty, and Agua Hedionda Lagoon. A bluff rising approximately 60 feet above mean sea level (MSL) faces on the west the gradually sloping sand of Carlsbad State Beach and a sea wall. At the jetty the boulevard cuts into the bluff about 30 feet above MSL and reaches the top near Tamarack Avenue approximately 700 feet north of the jetty. Directly east of the jetty is the northern extreme of the outer lagoon, the bluff and residences on its crown. The Atchison Topeka & Santa Fe (AT&SF) right-of-way and Interstate 5 are visible from the boulevard at the jetty, across the outer lagoon, to the east southeast.

Local Noise Environment. In addition to a "background" of indistinguishable noise sources there are several local sources. These are ocean surf, traffic on Carlsbad Boulevard, trains using the AT&SF tracks, passing between the outer and middle lagoons, and traffic on Interstate 5, passing between the middle and inner lagoons. Surf and traffic on Carlsbad Boulevard are the major noise sources near the jetty. Refer to Section B?1 in the Noise Appendix for a discussion of the characteristics of environmental noise. Additional discussion can be found in (SANDAG, 2000, Section 3.13.1).

Sensitive Receptors. The public on the State beach, residences north and east of the jetty, and those along Tamarack Avenue are the sensitive receptors that would be most affected by construction activities. The trucks carrying rock for the jetty extension would exit Interstate 5 at Tamarack, proceed west on Tamarack to Carlsbad Boulevard, and enter the parking lot near the jetty. The South Twin Oaks Quarry is located within an industrial zone in San Marcos, California. The roads designated for hauling rock to the construction site are designated truck routes.

Relationship Between Sources and Receptors. The CNEL averaged noise level at each sensitive receptor near the jetty depends directly upon its distance from Carlsbad Boulevard and surf. Terrain is also an important factor. The AT&SF railroad right-of-way and Interstate 5 provide a nearly uniform blanket of noise in the coastal area. Overflights by aircraft and the Encina power plant do not make significant contributions to CNEL noise levels. Most background noise originates from innumerable sources within the residential area. These consist of activities by individuals and traffic on residential streets.

Routinely generated noise reaches peak levels near Tamarack Avenue at Carlsbad Boulevard when trucks accelerate from a stop, along Carlsbad Boulevard between the jetty and Tamarack when trucks proceed up the grade, near Interstate 5 when trucks are present, and in the general area when trains pass through the community.